



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

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After the long, hard winter months, lakes and ponds across the Commonwealth are finally beginning to warm up. While this is a welcome sign to anglers and swimmers alike, it can be an extremely stressful time for many fish species. Since spring, the Division has been receiving reports of dead fish in a number of ponds throughout the state. Obviously, the sight (and smell) of up to hundreds of dead and dying fish along the shores of your favorite pond can be a distressing site and immediately bring thoughts of pollution. Fish do act as the “canary in the coalmine”, so it’s natural that someone would think a fish kill was the result of pollution. But in fact, the exact opposite is true. The vast majority of the fish kills reported turn out to be natural events.

Natural fish kills are generally the result of low oxygen levels, spawning stress or fish diseases. Dissolved oxygen depletion is one of the most common causes of natural fish kills. As water temperature increases, it simply cannot hold as much oxygen as when it was cold. During the long hot days of summer, oxygen levels in shallow, weedy ponds can further decline as the plants consume the oxygen at night resulting in low oxygen levels in the early hours of the morning. This situation can become critical if the levels fall below that required for fish to survive which is approximately 4-5 parts per million. In addition to the depressed oxygen conditions, late spring and early summer are when most warmwater fish species, such as sunfish (bluegill, pumpkinseed, largemouth bass etc.), begin to spawn. At this time, large numbers of these species crowd into the shallow waters along the shore vying for the best spawning sites. These densely crowded areas are susceptible to disease outbreaks especially as water temperatures increase. The result is a fish kill. Nothing can be done to prevent this; it is a natural occurrence.

So how do we know when a fish kill is reported whether it is natural event or the result of pollution? As the lead agency in fish kill response, a Division biologist will review each call and through a series of questions, make a determination on whether the kill is natural or requires a site investigation. The Division also maintains a 40+ year database which helps track waters with a history of natural kills. In the event that it is a pollution kill, the Division will notify DEP for analysis of water and fish samples as well as a formal investigation. To report a fish kill Monday through Friday between 8:00 am and 4:30 pm, contact Richard Hartley at (508) 389-6330 or one of the five District Offices. After normal business hours or on holidays and weekends, contact the Environmental Law Enforcement’s Radio Room at 1-800-632-8075.

[www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)